

**ABSTRACT**

A surveillance system is provided for surveillance of objects within a secure area. A surveillance sensor transmits surveillance signals to all objects within the secure area, the reflections of which are received back by the surveillance sensor to determine the locations of objects, and communicates the determined locations to a processing facility. Objects authorized to be in the secure area are equipped with an Identification Friend or Foe (IFF) unit that includes a GPS receiver and a data communication transmitter. In response to predetermined conditions, the IFF units broadcast their position and identification to the processing facility for correlation with locations defined by the reflection signals. The reflection signals from other objects are compared with a list of the locations of objects, such as terrain features and man-made facilities, that are known to be in the secure area. If no broadcast information is received from an object and the location of that object determined by the reflection signal cannot be correlated with the known object list, then the object has no proper authorization to be within the secure area, and an alarm is generated.

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